



# Alpha Chemika



ISO 9001 QUALITY SYSTEM CERTIFIED ORGANIZATION

## MATERIAL SAFETY DATA SHEET

### MSDS

Savgan Heights ; 102 ,B Wing ; R.T.O. Lane ,Andheri (West) Mumbai - 400053 , INDIA

## Section 1 - Chemical Product and Company Identification

### Product Name : HYDROQUINONE

**Synonyms:** 1,4-Dihydroxybenzene; p-Dihydroxybenzene; 1,4-Benzenediol; Dihydroxybenzene; Quinol

**CAS No.:** 123-31-9

**Molecular Weight:** 110.11

**Chemical Formula:** C<sub>6</sub>H<sub>4</sub>(OH)<sub>2</sub>

## Section 2 - Composition, Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Hydroquinone	123-31-9	90 - 100%	Yes

## Section 3 - Hazardous Identification

### Emergency Overview

**DANGER! MAY BE FATAL IF SWALLOWED. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE SKIN AND EYE IRRITATION. HARMFUL IF INHALED. MAY CAUSE ALLERGIC SKIN REACTION. CAUSES IRRITATION TO RESPIRATORY TRACT.**

**SAF-T-DATA<sup>(tm)</sup> Ratings** (Provided here for your convenience)

Health Rating: 2 - Moderate (Poison)

Flammability Rating: 1 - Slight

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Life)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Blue (Health)

## Potential Health Effects

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### **Inhalation:**

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Systemic effects have not been proven by this route.

### **Ingestion:**

Highly Toxic. May cause hyperactivity, stupor, fall in blood pressure, hyperpnea, abdominal pain, diarrhea, intense thirst, sweating, tinnitus, nausea, dizziness, a sensation of suffocation, an increased rate of respiration, vomiting, pallor, muscular twitching, headache, cyanosis, delirium, and collapse (from respiratory failure). Estimated lethal dose lies between 5 to 12 grams (usually because of respiratory failure from methemoglobin formation which leaves the blood unable to carry oxygen). May cause green to brownish-green urine.

### **Skin Contact:**

Causes severe irritation, redness and pain. Alkaline solutions can cause skin sensitization.

### **Eye Contact:**

Causes severe irritation and possible corneal ulceration.

### **Chronic Exposure:**

Repeated exposure to vapor or dust (typically 10 to 30 mg/m<sup>3</sup>) for > 5 years has caused brownish staining of the conjunctiva which may be followed by changes to the cornea leading to loss of visual acuity. Repeated exposure may also cause skin effects.

### **Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin or eye disorders or impaired respiratory function may be more susceptible to the effects of this substance.

## Section 4 - First Aid Measures

### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### **Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### **Skin Contact:**

Wipe off excess material from skin then immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

## Section 5 - Fire Fighting Measures

### **Fire:**

Flash point: 165C (329F) CC

Autoignition temperature: 516C (961F)

May pose a fire hazard when exposed to heat, flame, or oxidizing agents.

### **Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

### **Fire Extinguishing Media:**

Dry chemical, alcohol foam or carbon dioxide. Water or foam may cause frothing.

### **Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## Section 6 - Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

## Section 7 - Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Isolate from oxidizing materials. Protect from direct sunlight. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## Section 8 - Exposure Controls, Personal Protection

### **Airborne Exposure Limits:**

-OSHA Permissible Exposure Limit (PEL):  
2 mg/m<sup>3</sup> (TWA)

-ACGIH Threshold Limit Value (TLV):

1 mg/m<sup>3</sup> (TWA) A3 - Confirmed animal carcinogen with unknown relevance to humans

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded, and engineering controls are not feasible, a full-face piece respirator with an organic vapor cartridge and particulate filter (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P particulate filter. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. This compound possibly exists in both particulate and vapor phase. A gas/vapor cartridge should be used in addition to the particulate filter (NIOSH type N95 or better filter). If the vapor concentration alone exceeds the exposure limits, use a supplied air respirator, because warning properties are unknown for these compounds. Breathing air quality must meet the requirements of the OSHA respiratory protection standard (29CFR1910.134).

### **Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### **Eye Protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## Section 9 - Physical and Chemical Properties

### **Appearance:**

White crystals.

### **Odor:**

Odorless.

**Solubility:**

7g/100g water @ 25C (77F).

**Specific Gravity:**

1.33 @ 15C

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

285C (545F)

**Melting Point:**

170C (338F)

**Vapor Density (Air=1):**

3.81

**Vapor Pressure (mm Hg):**

4 @ 150C (302F)

**Evaporation Rate (BuAc=1):**

No information found.

## Section 10 - Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Solution becomes brown in air due to oxidation.

**Hazardous Decomposition Products:**

Quinone and oxides of carbon may be formed when this material is heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Sodium hydroxide, strong alkalis, and oxidizers.

**Conditions to Avoid:**

Heat, flame, ignition sources, incompatibles, light, and air.

## Section 11 - Toxicological Information

Oral rat LD50: 320 mg/kg; investigated as a tumorigen, mutagen, reproductive effector.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Hydroquinone (123-31-9)	No	No	3

## Section 12 - Ecological Information

**Environmental Fate:**

When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is not expected to evaporate significantly.

When released into water, this material may biodegrade to a moderate extent. This material has an experimentally-determined bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

**Environmental Toxicity:**

96 Hr LC50 rainbow trout: 0.097 mg/L;

96 Hr LC50 fathead minnow: 0.1 mg/L Dangerous to the environment. Very toxic to aquatic organisms.

## Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## Section 14 - Transport Information

### Domestic (Land, D.O.T.)

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (HYDROQUINONE)

**Hazard Class:** 9

**UN/NA:** UN3077

**Packing Group:** III

### Information reported for product/size:

#### International (Water, I.M.O.)

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (HYDROQUINONE)

**Hazard Class:** 9

**UN/NA:** UN3077

**Packing Group:** III

### Information reported for product/size:

#### International (Air, I.C.A.O.)

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (HYDROQUINONE)

**Hazard Class:** 9

**UN/NA:** UN3077

**Packing Group:** III

### Information reported for product/size:

## Section 15 - Regulatory Information

### -----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
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Hydroquinone (123-31-9)	Yes	Yes	Yes	Yes
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### -----\Chemical Inventory Status - Part 2\-----

Ingredient	--Canada--	Korea	DSL	NDSL	Phil.
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Hydroquinone (123-31-9)	Yes	Yes	No	Yes	
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### -----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302-	-----SARA 313-----		
	RQ	TPQ	List	Chemical Catg.

Hydroquinone (123-31-9) 100 500\* Yes No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-  
Ingredient CERCLA 261.33 8(d)

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Hydroquinone (123-31-9) 100 No No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes  
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No  
Reactivity: No (Pure / Solid)

## Section 16 - Additional Information

**NFPA Ratings:** Health: **3** Flammability: **1** Reactivity: **0**

**Label Hazard Warning:**

DANGER! MAY BE FATAL IF SWALLOWED. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES SEVERE SKIN AND EYE IRRITATION. HARMFUL IF INHALED. MAY CAUSE ALLERGIC SKIN REACTION. CAUSES IRRITATION TO RESPIRATORY TRACT.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.

Avoid breathing dust.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

**Label First Aid:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes.

Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

MSDS Section(s) changed since last revision of document include: 14.